

Sign up for [Insight Alerts](#) highlighting editor-chosen studies with the greatest impact on clinical care.



New! Video Abstracts -- brief videos summarizing key findings of new articles

Know what's next when you read AAP Journals, [view the new 2018 Catalog](#).



Trainees, enter the [SOPT Essay Contest](#) for a chance to be published in *Pediatrics*!



Make **PREP** the foundation of your lifelong learning!

Includes

[Advertising Disclaimer »](#)

[Tools and Links](#)

[Pediatrics](#)

April 2018, VOLUME 141 / ISSUE 4

From the American Academy of Pediatrics

Article

Vomiting With Head Trauma and Risk of Traumatic Brain Injury

Meredith L. Borland, Stuart R. Dalziel, Natalie Phillips, Sarah Dalton, Mark D. Lyttle, Silvia Bressan, Ed Oakley, Stephen J.C. Hearps, Amit Kochar, Jeremy Furyk, John A. Cheek, Jocelyn Neutze, Franz E. Babl, on behalf of the Paediatric Research in Emergency Department International Collaborative group

Article

Figures & Data

Supplemental

Info & Metrics

Comments

[Download PDF](#)

Abstract

OBJECTIVES: To determine the prevalence of traumatic brain injuries in children who vomit after head injury and identify variables from published clinical decision rules (CDRs) that predict increased risk.

METHODS: Secondary analysis of the Australasian Paediatric Head Injury Rule Study. Vomiting characteristics were assessed and correlated with CDR predictors and the presence of clinically important traumatic brain injury (ciTBI) or traumatic brain injury on computed tomography (TBI-CT). Isolated vomiting was defined as vomiting without other CDR predictors.

RESULTS: Of the 19 920 children enrolled, 3389 (17.0%) had any vomiting, with 2446 (72.2%) >2 years of age. In 172 patients with ciTBI, 76 had vomiting (44.2%; 95% confidence interval [CI] 36.9%–51.7%), and in 285 with TBI-CT, 123 had vomiting (43.2%; 95% CI 37.5%–49.0%). With isolated vomiting, only 1 (0.3%; 95% CI 0.0%–0.9%) had ciTBI and 2 (0.6%; 95% CI 0.0%–1.4%) had TBI-CT. Predictors of increased risk of ciTBI with vomiting by using multivariate regression were as follows: signs of skull fracture (odds ratio [OR] 80.1; 95% CI 43.4–148.0), altered mental status (OR 2.4; 95% CI 1.0–5.5), headache (OR 2.3; 95% CI 1.3–4.1), and acting abnormally (OR 1.86; 95% CI 1.0–3.4). Additional features predicting TBI-CT were as follows: skull fracture (OR 112.96; 95% CI 66.76–191.14), nonaccidental injury concern (OR 6.75; 95% CI 1.54–29.69), headache (OR 2.55; 95% CI 1.52–4.27), and acting abnormally (OR 1.83; 95% CI 1.10–3.06).

CONCLUSIONS: TBI-CT and ciTBI are uncommon in children presenting with head injury with isolated vomiting, and a management strategy of observation without immediate computed tomography appears appropriate.

Accepted January 17, 2018.

- Copyright © 2018 by the American Academy of Pediatrics

[View Full Text](#)

Log in using your username and password

[Forgot your user name or password?](#)

Log in through your institution

You may be able to gain access using your login credentials for your institution. Contact your library if you do not have a username and password.

[Pay Per Article](#) - You may access this article (from the computer you are currently using) for 2 days for US\$25.00

[Regain Access](#) - You can regain access to a recent Pay per Article purchase if your access period has not yet expired.

[Offer Reprints](#)

 Previous

Next 

Check out our **NEW look**
FOR PATIENT EDUCATION MATERIALS!

SAVE UP TO **20%**
on AAP brochures and booklets
when you order multiple packs!

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN®

[Advertising Disclaimer »](#)

View this article with
LENS

Previous Next

- Email
- Permissions
- Alerts
- Citation Tools
- Share
- Print
- PDF
- Insight Alerts

Table of Contents

[Early Release](#)

[Current Issue](#)

[Past Issues](#)

[Current Policy](#)

[Editorial Board](#)

[Editorial Policies](#)

[Overview](#)

[Open Access](#)

[Pediatric Collections](#)

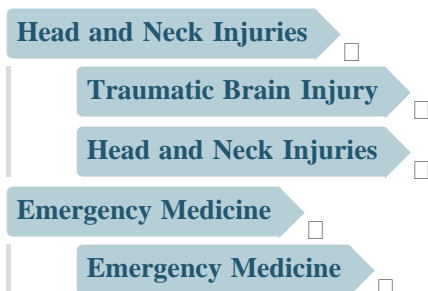
[Video Abstracts](#)

[Author Guidelines](#)

[Reviewer Guidelines](#)

[Submit My Manuscript](#)

Subjects



Related Articles

1. [CT or Not To CT?](#)
John Morrison et al., AAP News
2. [Does an Isolated History of Loss of Consciousness or Amnesia Predict Brain Injuries in Children After Blunt Head Trauma?](#)
Michael J. Palchak et al., Pediatrics
3. [Risk Factors for Epilepsy After Traumatic Brain Injury](#)
American Academy of Pediatrics, AAP Grand Rounds
4. [When to Use Computed Tomography in Minor Pediatric Head Trauma](#)
Atabaki SM et al., AAP Grand Rounds
5. [A Population-Based Comparison of Clinical and Outcome Characteristics of Young Children With Serious Inflicted and Noninflicted Traumatic Brain Injury](#)
Heather T. Keenan et al., Pediatrics

1. [Traumatic Brain Injury Rare for Children With Isolated Vomiting](#)

PracticeUpdate

2. [Headache and Traumatic Brain Injuries in Children](#)

PracticeUpdate

3. [G273 Accuracy of Physician Practice as Compared with Pecarn, Catch and Chalice Head Injury Clinical Decision Rules in Children. A Predict Prospective Cohort Study](#)

MD Lyttle et al., Arch Dis Child

4. [Computed Tomography of the Head in Children with Mild Traumatic Brain Injury](#)

Authors: Mihindu et al., The American Surgeon

5. [Management of Pediatric Mild Traumatic Brain Injury](#)

Robert C. Caskey et al., Advances in Pediatrics

Powered by TrendMD

[Back to top](#)



Copyright (c) 2018 by American Academy of Pediatrics

[International Access](#) »

[Terms of Use](#)

[Privacy Statement](#)

[FAQ](#)

American Academy
of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™